

WHAT IS CLAIMED IS:

1. An image forming apparatus, comprising:
 - an image bearing member;
 - charging means for charging said image
 - 5 bearing member;
 - developing means for developing an
 - electrostatic latent image with a developer to form a
 - developer image;
 - first auxiliary charging means, for charging
 - 10 a residual developer remaining on said image bearing
 - member, disposed downstream from a transfer position
 - where the developer image is transferred onto an image
 - receiving member and upstream from said charging
 - means, in a movement direction of a surface of said
 - 15 image bearing member; and
 - second auxiliary charging means, for charging
 - the residual developer, disposed downstream from said
 - first auxiliary charging means and upstream from said
 - charging means in the movement direction of the
 - 20 surface of said image bearing member;
 - wherein said first auxiliary charging member
 - is supplied with a DC voltage of a polarity opposite
 - to a normal polarity of the developer and with an AC
 - voltage, and said second auxiliary charging member is
 - 25 supplied with a DC voltage of a polarity identical to
 - the normal polarity of the developer.

2. An apparatus according to Claim 1, wherein the AC voltage has a waveform comprising a sinusoidal wave.

5 3. An apparatus according to Claim 1, wherein the AC voltage has a peak-to-peak voltage which is not less than a charge initiation voltage value between said image bearing member and said first auxiliary charging means.

10

4. An apparatus according to Claim 1, wherein said auxiliary charging means is supplied with a superposed voltage of the DC voltage with the AC voltage so as to form an alternating electric field
15 between said image bearing member and said first auxiliary charging means.

5. An apparatus according to Claim 1, wherein the AC voltage has a frequency of not less than 400 Hz
20 and not more than 5000 Hz.

6. An apparatus according to Claim 1, wherein the AC voltage has a peak-to-peak voltage value of not less than 300 V and not more than 1000 V.

25

7. An apparatus according to Claim 1, wherein the AC voltage has a frequency of not less than 400 Hz

and not more than 5000 Hz and a peak-to-peak voltage value of not less than 300 V and not more than 1000 V.

8. An apparatus according to Claim 1, wherein
5 said developing means is capable of developing the electrostatic latent image formed on said image bearing member with a developer to form a developer image and also recovering the residual developer from said image bearing member.

10

9. An apparatus according to Claim 1, wherein said charging means contacts said image bearing member to charge said image bearing member.

15

10. An apparatus according to Claim 1, wherein said charging means is supplied with an oscillating voltage.

11. An apparatus according to Claim 1, wherein
20 said first auxiliary charging means has an electroconductive fiber brush portion which contacts said image bearing member.

12. An apparatus according to Claim 1, wherein
25 the DC voltage applied to said first auxiliary charging means is switched to move the developer from said first auxiliary charging means to said image

bearing member.

13. An apparatus according to Claim 12, wherein
the switching of the DC voltage applied to said first
5 auxiliary charging means is performed by turning the
DC voltage on and off.

14. An apparatus according to Claim 12, wherein
the switching of the DC voltage applied to said first
10 auxiliary charging means is performed by changing a
polarity of the DC voltage from the polarity opposite
to the normal polarity of the developer to the normal
polarity of the developer.

15 15. An apparatus according to Claim 12, wherein
the developer is, after being transferred from said
first auxiliary charging means onto said image bearing
member, recovered by said developing means.

20 16. An apparatus according to Claim 12, wherein
the developer is, after being transferred from said
first auxiliary charging means onto said image bearing
member, recovered by said image receiving member.

25 17. An apparatus according to Claim 16, wherein
the developer is, after being transferred from said
first auxiliary charging means onto said image bearing

member, not recovered by said developing means.

18. An apparatus according to any one of Claims 1
- 17, wherein the apparatus includes a plurality of
5 image forming stations each comprising said image
bearing member, said charging means, said developing
means, said first auxiliary charging means, and said
second auxiliary charging means and further includes
an intermediary transfer member as the image receiving
10 member said intermediary transfer member being moved
opposite to each image forming station at which the
developer image is transferred from an associated
image bearing member onto said intermediary transfer
member.

15

19. An apparatus according to Claim 18, wherein
each of the image forming stations forms a developer
image different in color from each other.

20 20. An apparatus according to any one of Claims 1
- 17, wherein the apparatus includes a plurality of
image forming stations each comprising said image
bearing member, said charging means, said developing
means, said first auxiliary charging means, and said
25 second auxiliary charging means and further includes
a member for bearing and carrying the image receiving
member said intermediary transfer member being moved

opposite to each image forming station at which the developer image is transferred from an associated image bearing member onto said member for bearing and carrying the image receiving member.

5

21. An apparatus according to Claim 20, wherein each of the image forming stations forms a developer image different in color from each other.

10

15

20

25